

**Statement of John Felmy, Chief Economist,  
American Petroleum Institute, before the  
House Transportation and Infrastructure  
Subcommittee on Aviation**

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I am John Felmy, chief economist of the American Petroleum Institute – the national trade association of the U.S. oil and natural gas industry, representing all sectors of the industry, including companies that make, transport, and market jet fuel.

We very much appreciate this opportunity to discuss commercial jet fuel supply and its impact on -- and cost to -- the U.S. airline industry. Our companies are making the maximum effort to meet the demand of U.S. airlines for jet fuel.

However, to meet the long-term fuel needs of U.S. consumers and businesses, changes are needed in our energy policy: we need to increase oil and natural gas supply, reduce demand, and expand and diversify our energy infrastructure – and equally important, do no harm. The worst thing that Congress could do now would be to repeat the mistakes of the past by disrupting the free marketplace. Imposing new controls, allocation schemes, new taxes on industry, or other obstacles would only serve to make the situation worse.

Current Situation

For the week ended February 3, national inventories of kerosene jet fuel were 43.5 million barrels. This level is 2 percent above last year's level and 6 percent above the

average for 2001-2005 levels for the week. Production of kerosene jet fuel so far in 2006 has been about equal to the average for 2001-2005.

Last year, even with the major disruption to refineries caused by Hurricanes Katrina and Rita, jet fuel production nearly matched 2004's four-year high. These results are consistent with the very high level of refinery utilization with which the industry has been operating. Over the past year, the nation's refineries have operated at more than 90 percent of capacity for nearly two-thirds of the time and above 85 percent for nearly 90 percent of the time. Refineries have been running very hard to produce the wide range of petroleum products, such as gasoline, diesel fuel, heating oil and jet fuel that our customers need.

#### What Can Be Done

While the refinery system is running all-out to produce jet fuel and other crude oil products to meet customers' fuel needs, there is a limit to how hard refineries can run. The operations of a refinery are subject to decisions by each refinery manager and, most importantly, involve decisions on operations that are dominated by health and safety concerns. The U.S. oil and natural gas industry will not compromise the health and safety of its workers or surrounding communities for any reason. The industry is working hard to meet customer needs, but maintenance is necessary for safety and efficient operations and to meet regulatory requirements. I cannot foresee the future operations of our refinery

system, but I want to stress that refineries have been operating at high levels of utilization over the past year, and that, if maintenance is required, it will be done.

#### Background: The Jet Fuel Market

Jet fuel is produced in most of the 145 operable refineries in the U.S. As the attached chart shows, there are major refining centers throughout the country. These refining centers are connected by a web of petroleum products pipelines that deliver the jet fuel along with other petroleum products. The major flow of product is from the major refining areas in the Gulf coast to the East and Midwest. There are also other smaller movements of jet fuel between the other Petroleum Administration for Defense Districts.

The U.S. uses about 1.6 million barrels per day of jet fuel. Of this amount, about 1.5 million barrels per day are produced domestically and about 148,000 barrels per day are imported. A small amount – 52,000 barrels per day are exported – 77 percent to Canada and the United Kingdom primarily as fuel for international flights. The jet fuel loaded on aircraft for international flights is considered an export.

Jet fuel is bought and sold in spot markets such as New York Harbor, the Gulf Coast of the U.S., Los Angeles, Rotterdam and Singapore. It is also bought and sold between refiners and other major suppliers and airlines.

Kerosine-type jet fuel is also used by consumers for blending with diesel fuel in cold climates and as a heating fuel for over 7 million American homes. It is a high-sulfur fuel

that will not be allowed in the diesel fuel supply with the introduction of ultra-low sulfur diesel fuel later this year.

Jet fuel usage peaked in 2000 – but then, after September 11, 2001, declined sharply with the complete shutdown of air travel for a period and the sharp decline in travel when operations resumed. It has remained at about 1.6 million barrels per day since 2002.

Prices of jet fuel have generally followed the price of crude oil. The attached chart shows the variation in crude oil prices and jet fuel prices. Since 2000, the correlation between spot jet fuel prices and spot crude oil prices has been about 0.98 – indicating a strong relationship between the cost of crude oil to produce jet fuel and the price of jet fuel. This relationship varies at times due to the relative supply and demand conditions in the jet fuel market – and is particularly affected by major supply disruptions, such as we experienced after the hurricanes in 2005.

We recognize how the price of jet fuel has been a serious problem for the airlines. For example, about 25 billion gallons of jet fuel are used each year, so this has meant that the jet fuel costs rose by about \$250 million per year for every penny increase in the cost of jet fuel.

We believe that positive changes in U.S. energy policy can help to alleviate this burden on the airline industry – and better meet the energy needs of American consumers and the

U.S. economy as a whole. API is prepared to work with the Congress and the Administration to bring these changes about.

### Higher Energy Costs

The oil and natural gas industry recognizes the concerns across the country over the higher energy costs American consumers and businesses have been facing over the past year, including higher jet fuel costs. In order to understand these higher costs, we need to consider them in the context of the world energy supply situation.

A brief overview of the industry's status is in order. With the hurricane season past and much, but not all, of the lost Gulf of Mexico production and refining back on line, oil and natural gas prices have receded. But no one should conclude that we aren't facing some tremendous energy challenges ahead. The most recent forecasts of the U. S. Department of Energy's Energy Information Administration (EIA) indicate we still haven't escaped our energy predicament. Its sobering message to consumers: Strong demand, hurricane-affected production and infrastructure limitations could help keep markets tight and prices volatile for the foreseeable future.

As noted, crude oil is the single largest component of the price of a gallon of jet fuel. Before Hurricanes Katrina and Rita struck, the price of jet fuel was rising primarily because U.S. refiners have been paying more for crude oil.

It is important to remember that oil companies do not set the price of crude oil. Crude oil is bought and sold in international markets and the price paid for a barrel of crude oil reflects the market conditions of the day. There is a fragile balance between the world's supply and demand for crude oil. Because of this tight market, any disruption of oil supply – or even the threat of disruption – can push prices upward as buyers and sellers in the worldwide marketplace look to secure supplies for their customers. Obviously, the disruptions caused by the hurricanes were significant, as were the effects of these disruptions on fuel prices.

World oil demand reached unprecedented levels in 2004 and continues to grow. Strong economic growth, particularly in China and the United States, has fueled a surge in oil demand. EIA reports that global oil demand in 2004 grew by 3.2 percent – the strongest growth since 1978 – and projected growth to average 1.8 percent for 2005 and 2006. By comparison, world demand between 1993 and 2003 grew at an average rate of 1.6 percent.

At the same time, world oil spare production capacity – crude that can be brought online quickly during a supply emergency or during surges in demand – is at its lowest level in 30 years. Current spare capacity is equal to only about 1 percent of world demand. Thus, the world's oil production has lagged, forcing suppliers to struggle to keep up with the strong growth in demand.

The delicate supply/demand balance in the global crude oil market makes this market extremely sensitive to political and economic uncertainty, unusual weather conditions, and other factors. Over the past several years, we have seen how the market has reacted to such diverse developments as dollar depreciation, cold winters, the post-war insurgency in Iraq, hurricanes in the Gulf of Mexico, the Venezuelan oil workers' strike in 2002-2003, uncertainty in the Russian oil patch, ongoing ethnic and civil strife in Nigeria's key oil producing region, and decisions by OPEC.

We currently import more than 60 percent of the crude oil and petroleum products we consume. American refiners pay the world price for crude and distributors pay the world price for imported petroleum products. U.S. oil companies don't set crude oil prices. The world market does. Whether a barrel is produced in Texas or Saudi Arabia, it is sold on the world market, which is comprised of hundreds of thousands of buyers and sellers of crude oil from around the world.

Complicating the overall U.S. fuel supply/demand situation are numerous contributing factors. The new Energy Policy Act eliminates the reformulated gasoline oxygen requirement in May, and ultra-low sulfur diesel will be introduced starting June 1. The industry is working hard to meet these new requirements, but they are major transitions and will present a challenge.

### Meeting U.S. Energy Challenges

In attempting to meet the energy challenges we face, it is important to do no harm. The worst thing Congress could do now would be to repeat the mistakes of the past by overriding the structures of the free marketplace. Imposing new controls, allocation schemes, new taxes on industry, or other obstacles will only serve to make the situation much worse.

Because the market does remain healthy and competitive, it is imperative that it be permitted to continue functioning as freely of artificial restraints as possible. As we have consistently maintained, the answer to our energy situation is to increase supply, reduce demand and expand and diversify infrastructure.

The Energy Policy Act of 2005 signals a first step in a much-needed effort to enhance energy security and ensure the reliable delivery of affordable energy to consumers. Nevertheless, much remains to be done.

We can no longer afford to place off limits vast areas of the Eastern Gulf of Mexico, off the Atlantic and Pacific coasts, and offshore Alaska. Similarly, we cannot afford to deny Americans consumers the benefits that will come from opening the Arctic National Wildlife Refuge and from improving and expediting approval processes for developing the substantial resources on federal, multi-use lands in the West.

In fact, we do have an abundance of competitive domestic oil and gas resources in the U.S. According to the latest published estimates, there are more than 131 billion barrels of oil and more than 1000 TCF of natural gas remaining to be discovered in the United States.

Much of these oil and gas resources – 78 percent of the remaining to be discovered oil and 62 percent of the gas – are expected to be found beneath federal lands and coastal waters. The amount here is enough oil to power 55 million cars for 30 years *and* heat 24 million homes for 30 years. And there is enough natural gas to heat 60 million homes that use natural gas for 120 years.

Federal restrictions on leasing put significant volumes of these resources off limits, while post-lease restrictions on operations effectively preclude development of both federal and non-federal resources. Addressing these restrictions is critical.

And, while we must focus on producing more energy here at home, we do not have the luxury of ignoring the global energy situation. In the world of energy, the U.S. operates in a global marketplace. What others do in that market matters greatly.

For this country to secure energy for our economy, government policies must create a level playing field for U.S. companies to ensure international supply competitiveness. With the net effect of current U.S. policy serving to decrease U.S. oil and gas production

and to increase our reliance on imports, this international competitiveness point is vital. In fact, it is a matter of national security.

### Natural Gas

An important, related issue is natural gas, which fuels our economy – not only heating and cooling homes and businesses but also generating electricity. It is used by a wide array of industries – fertilizer and agriculture; food packaging; pulp and paper; rubber; cement; glass; aluminum, iron and steel; and chemicals and plastics. And, natural gas is an essential feedstock for many of the products used in our daily lives – clothing, carpets, sports equipment, pharmaceuticals and medical equipment, computers, and auto parts.

Only four to five years ago, natural gas prices were in the \$2 to \$3 per million Btu (MMBtu) range. Recently, prices have settled in the \$12-14 per MMBtu range, reaching record levels in October 2005. Higher natural gas prices have taken their toll – more than 2.8 million U.S. manufacturing jobs have been lost since 2000, and chemical companies closed 70 facilities in the year 2004 alone and have tagged at least 40 more for shutdown.

Unlike oil, natural gas imports in the form of liquefied natural gas (LNG) are limited by the lack of import terminals. There are only five operating in the United States. A number of additional terminals have been proposed but many have run into not-in-my-backyard opponents and complex permitting requirements. While natural gas imports from Canada

have been important, Canada's own needs are growing. Expanding our ability to tap into global natural gas supplies is essential.

The National Petroleum Council (NPC) study, "Balancing Natural Gas Policy: Fueling the Demands of A Growing Economy" (2003), highlighted the significant costs associated with current policies – such as access restrictions on the Outer Continental Shelf and process impediments to development in the West – that impede the development of America's abundant natural gas resources. The NPC estimated that continuing on our current policy path could result in \$300 billion more in consumer costs over 20 years.

#### The Need for Increased Refining Capacity

Beyond easing the way for greater development of oil and natural gas, we must also address the nation's refinery capacity challenge. The record-high fuel prices, while primarily caused by increased crude oil prices and exacerbated by Hurricanes Katrina and Rita, have underscored the fact that U.S. demand for petroleum products has been growing faster than – and even exceeds – domestic refining capacity. While refiners have increased the efficiency, utilization and capacity of existing refineries, these efforts have not enabled them to keep up with growing demand.

The U.S. refining industry has been expanding a little more than 1 percent per year over the past decade – the equivalent of a mid-size refinery being built each year. In order to

create the opportunity for increasing the growth of U.S. refining capacity, government policies are needed to create a climate more conducive to investments in the refining industry.

In addition, many of the steps the federal government could take to help the refinery capacity situation are covered in the December 2004 National Petroleum Council (NPC) study, *Observations on Petroleum Product Supply – A Supplement to the NPC Reports “U.S. Petroleum Product Supply – Inventory Dynamics, 1998” and “U.S. Petroleum Refining – Assuring the Adequacy and Affordability of Cleaner Fuels, 2000.”*

The NPC study suggested that the federal government should take steps to streamline the permitting process to ensure the timely review of federal, state and local permits to expand capacity at existing refineries.

For example, new-source review (NSR) requirements of the Clean Air Act need to be reformed to clarify what triggers these reviews. Some refineries may be able to increase capacity with relatively minor adjustments, but are unsure if the entire facility’s permit review would be triggered – a burdensome and time-consuming process.

In addition to the administrative issues deterring new refining capacity investments, there are financial constraints as well. Attracting capital for new refining capacity has been difficult with refining rates of return historically averaging well below the average for

S&P Industrials. Over the 10-year 1994-2003 period, the return on investment for the refining and marketing sector was 6.2 percent or less than half as much as the 13.5 percent for S&P Industrials. In only one year between 1977 and 2003 did the average return of refiners exceed the average for the S&P Industrials.

While taking these factors into account, it is important to remember that the oil and natural gas industry operates in a global marketplace. Many oil and gas companies are global companies, whose U.S. investment decisions compete not only with decisions as to how to allocate capital investments in the U.S. among various sectors of the industry, but also with competing demands and investment needs overseas. In a global marketplace, companies will make the best economic investment decisions in order to bring affordable petroleum products to consumers. Imports may be the more economical option than new U.S. refineries, but that is a decision to be left to the global marketplace. Government policies must encourage, not interfere with, the global marketplace.

#### Oil and Natural Gas Company Earnings in Perspective

There has been considerable misunderstanding and misinformation about the earnings of U.S. oil and natural gas companies. It is our hope that a better understanding of those earnings and how they compare with other industries will discourage potentially harmful action on the part of our national leadership. The oil and natural gas industry is among the world's largest industries. Its revenues are large, but so are its costs of providing

consumers with the energy they need. Included are the costs of finding and producing oil and natural gas and the costs of refining, distributing and retailing it.

The energy Americans consume today is brought to us by investments made years or even decades ago. Today's oil and natural gas industry earnings are invested in new technology, new production, and environmental and product quality improvements to meet tomorrow's energy needs. *Oil & Gas Journal* estimated that the industry's total U.S. spending in 2005 was \$85.7 billion, compared with \$80.7 billion in 2004 and \$75.5 billion in 2003. It also estimated that exploration and production spending in the U.S. grew 6 percent and that total upstream oil and gas spending in the United States was nearly \$66 billion.

The industry's earnings are very much in line with other industries and often they are lower. This fact is not well understood, in part, because the reports typically focus on only half the story – the total earnings reported. Earnings reflect the size of an industry, but they're not necessarily a good reflection of financial performance. Earnings per dollar of sales (measured as net income divided by sales) provide a more relevant and accurate measure of a company's or an industry's health, and also provide a useful way of comparing financial performance between industries, large and small.

For the third quarter of 2005, the oil and natural gas industry earned 8.2 cents for every dollar of sales compared to an average of 6.8 cents for all U.S. industry. For the second

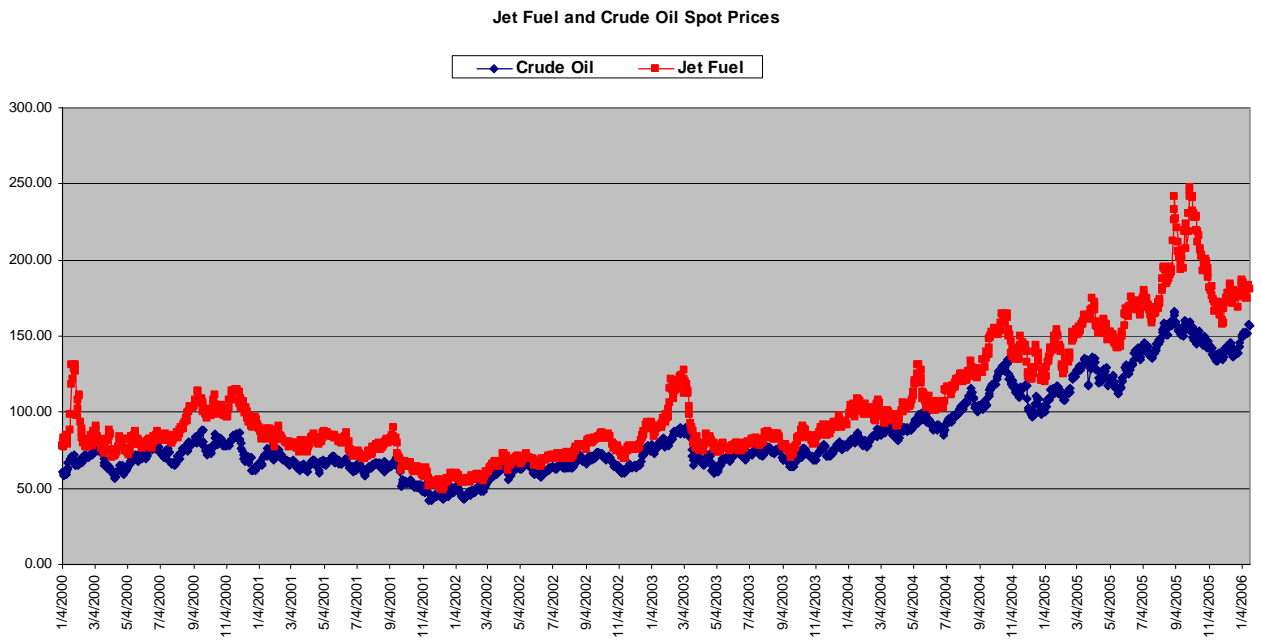
quarter of 2005, the oil and natural gas industry earned 7.7 cents for every dollar of sales compared to an average of 7.9 cents for all U.S. industry. Over the last five years, the oil and natural gas industry's earnings averaged 5.8 cents compared to an average for all U.S. industry of 5.5 cents for every dollar of sales.

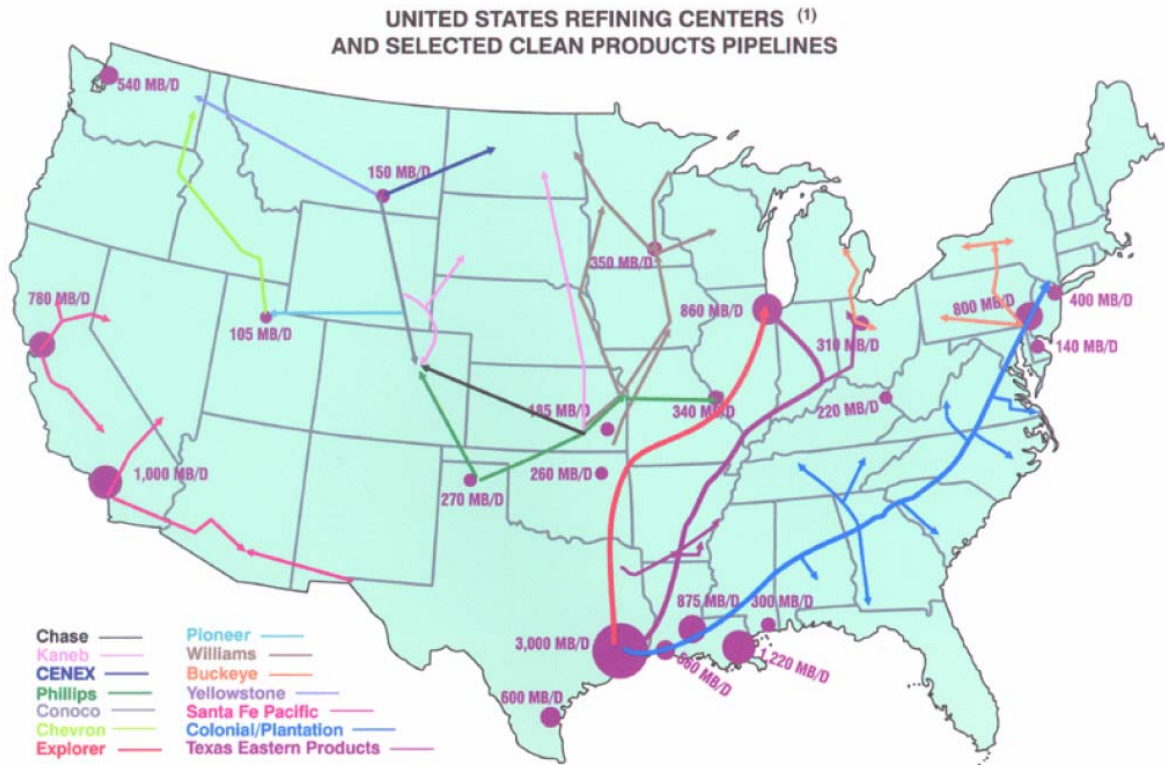
It is also important to understand that those benefiting from healthy oil and natural gas industry earnings include numerous private and government pension plans, including 401K plans, as well as many thousands of individual American investors. While many shares are owned by individual investors, firms, and mutual funds, pension plans own 41 percent of oil and natural gas company stock. To protect the interest of their shareholders and help meet future energy demand, companies are investing heavily in finding and producing new supplies and in new refinery capacity.

### Conclusion

The U.S. oil and natural gas industry recognizes the impact that high commercial jet fuel costs are having on the U.S. airline industry. The industry is making the maximum effort to produce the jet fuel supply needed to meet demand. However, the industry cannot meet U.S. energy challenges alone. Positive changes are needed in U.S. energy policies if we are to meet future U.S. energy needs. Access to domestic energy resources must be provided, and our energy infrastructure needs to be strengthened.

Addressing the nation's energy problems is an enormous long-term challenge. If we all do our part—industry providing energy products, government removing barriers and increasing access to supplies, and consumers using fuel more wisely—the United States will be able to meet its energy and economic needs in the years ahead.





<sup>(1)</sup> Based on Crude Capacity from 12/21/98 *Oil & Gas Journal*.